c) REMARKS

The claims are 1-8, with Claims 1 and 5 being independent. Claims 1 and 5 were amended to better define the intended invention. Claims 2 and 6 were amended to resolve a minor informality unrelated to patentability.

Claims 5-8 were withdrawn as directed to a non-elected species. Since key features of claims 1 and 5 are identical, then if claim 1 is deemed allowable, claim 5 should be rejoined and allowed, together with the claims dependent thereon. To facilitate rejoinder, claim 5 has been amended to correspond with claim 1.

Claims 1, 3 and 4 were rejected under 35 U.S.C. § 102(b) as being anticipated by Takai, JP-08-97161 (Takai '161). Claims 1-4 were rejected as obvious over Takai '161 in view of Kawasaki '529. The grounds of rejection are respectfully traversed.

Prior to addressing the grounds of rejection, Applicants wish briefly review key features and advantages of the present invention. An important feature of the present claimed invention is forming a deposited film on a substrate using a plasma CVD film-forming vessel while repetitively applying a periodicity voltage having at least two different periodic waveform components having a different amplitude to an auxiliary electrode arranged either at a position in the plasma generation region of the film-forming vessel or on a side opposite a film-forming face of the substrate in the film-forming vessel. The disclosure of "ONE REPETITIVE CYCLE" includes applying a voltage waveform comprising at least two different periodic waveform components, each component having a different amplitude. This feature is also supported, inter alia, on page 22, lines 20-25; pages 57, lines 5-25, page 73, lines 8 to page 74, line 16 and in Figs. 5-8.

On page 58, lines 4-13 the waveforms of Figs. 5-8 each show a first periodic waveform component having a first amplitude to enhance change rate of hydrogen radical and a second periodic waveform component having a second (different) amplitude to enhance formation of silane radical.

If a periodicity component having an AC component and a DC component is employed, where the DC waveform has a constant waveform, while the AC component varies with time, the generation of radicals is inhibited as noted on page 36, lines 8-23.

The Examiner argues Takai has a waveform component at 20-450 MHz and a DC bias voltage component. That rejection is respectfully traversed.

The DC waveform of Takai has a constant amplitude since it is not a periodic waveform in which amplitude varies with time. This is different from applying a periodicity voltage having two different periodic waveforms having different amplitudes.

The defects of Takai are not remedied by Kawasaki. The present claimed invention applies the periodic voltage with different periodic waveform components having different amplitude to an auxiliary electrode in the plasma generation region. See electrode 110 in instant Fig. 1. A separate discharge electrode 105 is opposed to the substrate. The auxiliary electrode is spaced within the plasma generated.

To the contrary, in Kawasaki, power is applied to electrode 5 which is below wafer 6 and not in discharge plasma space 7. In Figs. 11 and 12, a grid electrode 29 receives DC voltage, not a periodic voltage with different periodic waveform components with different amplitude. Therefore, Kawasaki does not teach applying voltage to an

auxiliary electrode in a plasma generation region of two different periodic waveforms with different amplitude. There is no motivation to apply Kawasaki to Takai.

Wherefore, none of the references, whether alone or combined, disclose or suggest the present claimed invention nor render it unpatentable. Accordingly, the claims should be allowed and the case passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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